

EXHIBIT 4

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of : Jason Sterne et al.
:
For : A METHOD AND SYSTEM FOR
: USING A QUEUING DEVICE AS A
: LOSSLESS STAGE IN A NETWORK
: DEVICE IN A COMMUNICATIONS
: NETWORK
:
Serial No. : 11/377,578
:
Filed : March 17, 2006
:
Art Unit : 2419
:
Examiner : Hong Sol Cho
:
Att. Docket : ALC 3229
:
Confirmation No. : 5342

APPEAL BRIEF

Mail Stop Appeal Brief Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

This Appeal Brief is submitted in support of the Notice of Appeal filed April 8, 2009.

I. REAL PARTY IN INTEREST

The party in interest is Alcatel, by way of an Assignment recorded at Reel 017900, frame 0184.

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II. RELATED APPEALS AND INTERFERENCES

Following are identified any prior or pending appeals, interferences or judicial proceedings, known to Appellant, Appellant's representative, or the Assignee, that may be related to, or which will directly affect or be directly affected by or have a bearing upon the Board's decision in the pending appeal:

NONE.

III. STATUS OF CLAIMS

Claims 1, 2, 4-10, 12-22, 24-30, and 32-36 are on appeal.

Claims 1, 2, 4-10, 12-22, 24-30, and 32-36 are pending.

No claims are allowed.

Claims 1, 2, 4-10, 12-22, 24-30, and 32-36 are rejected.

Claims 3, 11, 23, and 31 are canceled.

IV. STATUS OF AMENDMENTS

All amendments have been entered.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The subject matter recited in independent claim 1 relates to a method for

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incorporating a queuing device [Fig. 1: 140] as a lossless processing stage (paragraph [0011], line 3) in a network device [Fig. 1: 110] in a communications network [Fig. 1: 100], comprising: monitoring a depth of a queue (paragraph [0035], lines 1-2) in the queuing device [Fig. 1: 140], the queue for receiving packets from an upstream device [Fig. 1: 120] within the network device [Fig. 1: 110], the queuing device [Fig. 1: 140] acting as a discard point by discarding packets when the queue is full (paragraph [0035], lines 4-5); if the depth passes a predetermined threshold (paragraph [0036], lines 1-2), sending a message to the upstream device [Fig. 1: 120] to reduce a rate at which packets are sent (paragraph [0036], lines 2-3) to the queuing device [Fig. 1: 140] to prevent the queue from filling (paragraph [0036], line 4) and thereby preventing packet discarding and loss (paragraph [0036], lines 4-5) by the queuing device [Fig. 1: 140]; and sending a message reporting the depth of the queue (paragraph [0038], lines 5-6) to the upstream device [Fig. 1: 120] to thereby enable the upstream device [Fig. 1: 120] to determine whether to reduce or increase the rate (paragraph [0038], lines 7-8) at which the upstream device [Fig. 1: 120] sends packets to the queuing device [Fig. 1: 140].

The subject matter recited in dependent claim 2 relates to if the depth drops below the predetermined threshold (paragraph [0038], lines 1-2), sending a message to the upstream device [Fig. 1: 120] to increase the rate at which packets are sent (paragraph [0038], lines 2-4) to the queuing device [Fig. 1: 140].

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The subject matter recited in independent claim 9 relates to a system for incorporating a queuing device [Fig. 1: 140] as a lossless processing stage (paragraph [0011], line 3) in a network device [Fig. 1: 110] in a communications network [Fig. 1: 100], comprising: a processor [Fig. 1: 160] coupled to the queuing device [Fig. 1: 140]; and, modules executed by the processor [Fig. 1: 160], the modules including: a module for monitoring a depth of a queue (paragraph [0035], lines 1-2) in the queuing device [Fig. 1: 140], the queue for receiving packets from an upstream device [Fig. 1: 120] within the network device [Fig. 1: 110], the queuing device [Fig. 1: 140] acting as a discard point by discarding packets when the queue is full (paragraph [0035], lines 4-5); a module for, if the depth passes a predetermined threshold (paragraph [0036], lines 1-2), sending a message to the upstream device [Fig. 1: 120] to reduce a rate at which packets are sent (paragraph [0036], lines 2-3) to the queuing device [Fig. 1: 140] to prevent the queue from filling (paragraph [0036], line 4) and thereby preventing packet discarding and loss (paragraph [0036], lines 4-5) by the queuing device [Fig. 1: 140]; and a module for sending a message reporting the depth of the queue (paragraph [0038], lines 5-6) to the upstream device [Fig. 1: 120] to thereby enable the upstream device [Fig. 1: 120] to determine whether to reduce or increase the rate (paragraph [0038], lines 7-8) at which the upstream device [Fig. 1: 120] sends packets to the queuing device [Fig. 1: 140].

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The subject matter recited in dependent claim 10 relates to if the depth drops below the predetermined threshold (paragraph [0038], lines 1-2), sending a message to the upstream device [Fig. 1: 120] to increase the rate at which packets are sent (paragraph [0038], lines 2-4) to the queuing device [Fig. 1: 140].

The subject matter recited in independent claim 21 relates to a method for incorporating an integrated queuing and packet processing device [Fig. 1: 140] as a lossless processing stage (paragraph [0011], line 3) in a network device [Fig. 1: 110] in a communications network [Fig. 1: 100], comprising: monitoring a depth of a queue (paragraph [0035], lines 1-2) in the integrated device [Fig. 1: 140], the queue for receiving packets from an upstream device [Fig. 1: 120] within the network device [Fig. 1: 110], the packets from the upstream device [Fig. 1: 120] including packets having different priorities arbitrated by the upstream device [Fig. 1: 120], the integrated device [Fig. 1: 140] acting as a discard point by discarding packets when the queue is full (paragraph [0035], lines 4-5); if the depth passes a predetermined threshold (paragraph [0036], lines 1-2), sending a message to the upstream device [Fig. 1: 120] to reduce a rate at which packets are sent (paragraph [0036], lines 2-3) to the integrated device [Fig. 1: 140] to prevent the queue from filling (paragraph [0036], line 4) and thereby preventing packet discarding and loss (paragraph [0036], lines 4-5) by the integrated device [Fig. 1: 140], wherein a rate at which data is sent to the integrated device [Fig. 1: 140] differs from a rate at which data is sent from the integrated device

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[Fig. 1: 140] due to packet processing within the integrated device [Fig. 1: 140]; and sending a message reporting the depth of the queue (paragraph [0038], lines 5-6) to the upstream device [Fig. 1: 120] to thereby enable the upstream device [Fig. 1: 120] to determine whether to reduce or increase the rate (paragraph [0038], lines 7-8) at which the upstream device [Fig. 1: 120] sends packets to the integrated device [Fig. 1: 140].

The subject matter recited in dependent claim 22 relates to if the depth drops below the predetermined threshold (paragraph [0038], lines 1-2), sending a message to the upstream device [Fig. 1: 120] to increase the rate at which packets are sent (paragraph [0038], lines 2-4) to the queuing device [Fig. 1: 140].

The subject matter recited in independent claim 29 relates to a queuing device [Fig. 1: 140] for incorporation as a lossless processing stage (paragraph [0011], line 3) in a network device [Fig. 1: 110] in a communications network [Fig. 1: 100], comprising: a processor [Fig. 1: 160] coupled to a queue, the queue for receiving packets from an upstream device [Fig. 1: 120] within the network device [Fig. 1: 110]; and, modules executed by the processor [Fig. 1: 160], the modules including: a module for monitoring a depth of the queue (paragraph [0035], lines 1-2), the queuing device [Fig. 1: 140] acting as a discard point by discarding packets when the queue is full (paragraph [0035], lines 4-5); a module for, if the depth passes a predetermined threshold (paragraph [0036], lines 1-2), sending a message to the upstream device [Fig. 1: 120] to reduce a rate at which packets are sent (paragraph [0036], lines 2-3) to the

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queuing device [Fig. 1: 140] to prevent the queue from filling (paragraph [0036], line 4) and thereby preventing packet discarding and loss (paragraph [0036], lines 4-5) by the queuing device [Fig. 1: 140]; and a module for sending a message reporting the depth of the queue (paragraph [0038], lines 5-6) to the upstream device [Fig. 1: 120] to thereby enable the upstream device [Fig. 1: 120] to determine whether to reduce or increase the rate (paragraph [0038], lines 7-8) at which the upstream device [Fig. 1: 120] sends packets to the queuing device [Fig. 1: 140].

The subject matter recited in dependent claim 30 relates to: if the depth drops below the predetermined threshold (paragraph [0038], lines 1-2), sending a message to the upstream device [Fig. 1: 120] to increase the rate at which packets are sent (paragraph [0038], lines 2-4) to the queuing device [Fig. 1: 140].

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The following grounds of rejection are presented for review:

A. Claims 1, 2, 4-10, 12-18, 20-22, 24-30, and 32-36 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Publication No. 2005/0185581 to Bradford et al. (hereinafter “Bradford”) in view of U.S. Patent No. 7,408,876 to Gupta et al. (hereinafter “Gupta”).

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B. Claim 19 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Bradford in view of Gupta and further in view of U.S. Publication No. 2002/0163885 to Assa et al. (hereinafter "Assa").

VII. ARGUMENT

A. Rejection of Claims 1, 2, 4-10, 12-18, 20-22, 24-30, and 32-36 Under 35 U.S.C. § 103(a)

The Final Office Action dated March 25, 2009, rejects claims 1, 2, 4-10, 12-18, 20-22, 24-30, and 32-36 under 35 U.S.C. § 103(a) as allegedly unpatentable over Bradford in view of Gupta.

1. Independent Claims 1, 9, 21, and 29

Independent claim 1 recites, in part, the following subject matter: "monitoring a depth of a queue" (emphasis added). Independent claims 9, 21, and 29 recite similar subject matter. This subject matter finds support, for example, in paragraph [0035] of the published version of the specification. Appellant respectfully submits that Bradford and Gupta, alone or in combination, do not disclose, teach, or suggest this subject matter.

On page 2, the Office Action alleges that Bradford discloses this subject matter, but fails to identify any portions of Bradford to support this allegation. While Bradford may disclose a queue management algorithm [abstract, line 3], Appellant respectfully

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submits that Bradford does not monitor a depth of a queue. Instead of periodically reporting queue depths, Bradford only reports threshold crossing events, defined as a low threshold (L) and a hysteresis threshold (Ht). See paragraph [0030] of Bradford.

Independent claim 1 further recites, in part, the following subject matter: “the queuing device acting as a **discard point** by discarding packets when the queue is **full**” (emphasis added). Independent claims 9, 21, and 29 recite similar subject matter. This subject matter finds support, for example, in paragraph [0035] of the specification. Appellant respectfully submits that Bradford and Gupta, alone or in combination, do not disclose, teach, or suggest this subject matter.

On page 2, the Office Action alleges that Bradford discloses this subject matter but fails to identify any portions of Bradford to support this allegation other than an oblique reference to claim 1 of Bradford. From reviewing part (e) of claim 1 in Bradford, Applicant notes that Bradford drops packets “if the queue level is greater than or equal to the **hysteresis threshold**.”

Applicant respectfully submits discarding packets based upon a hysteresis threshold is not the same as discarding packets when the **queue is full**. As defined in paragraph [0061] of Bradford, the hysteresis threshold is clearly less than the maximum queue capacity, so a queue reaching Bradford’s hysteresis threshold is not full. Also see Fig. 7, where all values of queue occupancy are less than 50%.

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Independent claim 1 further recites, in part, the following subject matter: “if the depth passes a predetermined **threshold**, sending a message to the upstream device to **reduce a rate** at which packets are sent to the queuing device” (emphasis added). Independent claims 9, 21, and 29 recite similar subject matter. This subject matter finds support, for example, in paragraph [0036] of the specification. Appellant respectfully submits that Bradford and Gupta, alone or in combination, do not disclose, teach, or suggest this subject matter.

On pages 2 and 3, the Office Action correctly concedes that Bradford fails to disclose this subject matter. The Office Action then attempts to remedy Bradford’s admitted deficiency by applying Gupta’s teachings. In particular, the Office Action relies upon col. 6, line 60 through col. 7, line 15 in Gupta.

As disclosed by lines of col. 6, Gupta’s egress queue manager [Fig. 2: 106] sends congestion messages [124] to the ingress queue manager [108] to cause the ingress queues to slow down the rate at which packets are dequeued. Applicant respectfully submits that these congestion messages do not report the depth of the egress queue. Moreover, Gupta’s message reflect queue thresholds [122] rather than actual queue depths, as recited in independent claims 1, 9, 21, and 29.

Independent claim 1 recites, in part, the following subject matter: “sending a message reporting the **depth** of the queue to the upstream device to thereby enable the upstream device to **determine** whether to reduce or increase the rate at which the

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upstream device sends packets to the queuing device" (emphasis added). Independent claims 9, 21, and 29 recite similar subject matter. This subject matter finds support, for example, in paragraph [0038] of the specification. Appellant respectfully submits that Bradford and Gupta, alone or in combination, do not disclose, teach, or suggest this subject matter.

On pages 2 and 3, the Office Action correctly concedes that Bradford fails to disclose this subject matter. As described above, the Office Action attempts to use Gupta's teachings to remedy Bradford's deficiencies. However, Gupta only sends congestion messages in response to the queue thresholds, thereby failing to send messages that reporting the actual depth of the queue.

Moreover, Applicant respectfully submits that Gupta fails to enable an upstream device to determine whether to reduce or increase the packet sending rate. Instead, the congestion messages [124] function as direct commands to the ingress queue manager [108]. Gupta completely lacks any concept of determining the rate in an upstream device because Gupta's egress queue manager [106] dictates the subsequent actions of the ingress queue manager [108]. In addition, Gupta only describes rate reduction, never describing an option to increase a packet rate.

For the reasons detailed above, Appellant respectfully submits that claims 1, 9, 21, and 29 are allowable over Bradford in view of Gupta. Accordingly, Appellant respectfully requests withdrawal of the rejection of claims 1, 9, 21, and 29.

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2. Dependent Claims 2, 10, 22, and 30

Dependent claim 2 recites, in part, the following subject matter: “if the depth drops below the predetermined threshold, sending a message to the upstream device to increase the rate at which packets are sent to the queuing device” (emphasis added). Dependent claims 10, 22, and 30 recite similar subject matter. This subject matter finds support, for example, in paragraph [0038] of the published version of the specification. Appellant respectfully submits that Bradford and Gupta, alone or in combination, do not disclose, teach, or suggest this subject matter.

On page 3, the Office Action alleges that paragraph [0008] of Bradford discloses this subject matter. Applicant respectfully submits that this allegation is erroneous because paragraph [0008] of Bradford is drawn to prevention of tail drop, a conventional queue management technique where newly arriving packets are dropped until the queue has enough room to accept incoming traffic. Tail drop clearly is not an issue when the queue depth is dropping, reflecting a lack of packets.

Moreover, paragraph [0008] of Bradford is clearly unrelated to an increase in the rate at which packets are sent to the queuing device. Instead, this section of Bradford deals with an increase in the packet transmit rate, transmitting packets out of the queue to rapidly empty it when there is a risk of tail drop. This operation is clearly not the same as increasing the rate of packets arriving in the queue.

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Claim 2 depends from claim 1, claim 10 depend from claim 9, claim 22 depends from claim 21, and claim 30 depend from claim 29. Thus, claims 2, 10, 22, and 30 are allowable for at least the reasons stated above in connection with claims 1, 9, 21, and 29, as well as for the separately patentable subject matter recited therein. Accordingly, Appellant respectfully requests withdrawal of the rejections of claims 2, 10, 22, and 30.

3. Dependent Claims 4-8, 12-18, 20, 24-28, and 32-36

Claims 4-8 depend from claim 1. Claims 12-18 and 20 depend from claim 9. Claims 24-28 depend from claim 21. Claims 32-36 depend from claim 29. Thus, claims 4-8, 12-18, 20, 24-28, and 32-36 are allowable for at least the reasons stated above in connection with claims 1, 9, 21, and 29, as well as for the separately patentable subject matter recited therein. Accordingly, Appellant respectfully requests withdrawal of the rejections of claims 4-8, 12-18, 20, 24-28, and 32-36.

B. Rejection of Claim 19 Under 35 U.S.C. § 103(a)

The Final Office Action dated March 25, 2009, rejects claim 19 under 35 U.S.C. § 103(a) as allegedly unpatentable over Bradford in view of Gupta, further in view of Assa.

Bradford and Gupta have been described above in connection with the rejection of claim 9, from which claim 19 depends. Appellant respectfully submits that Assa fails to remedy the deficiencies of Bradford in view of Gupta. In particular, Assa does

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not disclose, teach, or suggest “sending a message reporting the depth of the queue to the upstream device to thereby enable the upstream device to determine whether to reduce or increase the rate at which the upstream device sends packets to the queuing device” as recited in claim 9.

Thus, claim 19 is allowable for at least the reasons stated above in connection with claim 9, as well as for the separately patentable subject matter recited therein. Accordingly, Appellant respectfully requests withdrawal of the rejection of claim 9.

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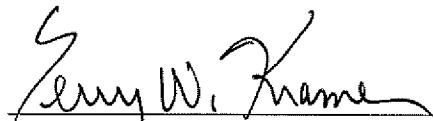
CONCLUSION

For at least the reasons discussed above, it is respectfully submitted that the rejections are in error and that claims 1, 2, 4-10, 12-22, 24-30, and 32-36 are in condition for allowance. Therefore, Appellants respectfully request that this Honorable Board reverse the rejections of claims 1, 2, 4-10, 12-22, 24-30, and 32-36.

Respectfully submitted,
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July 16, 2009
Date

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VIII. CLAIMS APPENDIX

CLAIMS INVOLVED IN THE APPEAL:

- 1
- 1 1. (Previously Presented) A method for incorporating a queuing device as a lossless
- 2 processing stage in a network device in a communications network, comprising:
 - 3 monitoring a depth of a queue in the queuing device, the queue for receiving
 - 4 packets from an upstream device within the network device, the queuing device acting
 - 5 as a discard point by discarding packets when the queue is full;
 - 6 if the depth passes a predetermined threshold, sending a message to the
 - 7 upstream device to reduce a rate at which packets are sent to the queuing device to
 - 8 prevent the queue from filling and thereby preventing packet discarding and loss by
 - 9 the queuing device; and
 - 10 sending a message reporting the depth of the queue to the upstream device to
 - 11 thereby enable the upstream device to determine whether to reduce or increase the
 - 12 rate at which the upstream device sends packets to the queuing device.

- 1
- 1 2. (Previously Presented) The method of claim 1, further comprising, if the depth
- 2 drops below the predetermined threshold, sending a message to the upstream device to
- 3 increase the rate at which packets are sent to the queuing device.

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1 3. (Canceled)

1 4. (Original) The method of claim 1 wherein the monitoring further comprises
2 comparing a rate at which packets enter the queuing device to a rate at which packets
3 exit the queuing device.

1 5. (Original) The method of claim 1 wherein the network device is a router, switch,
2 or gateway.

1 6. (Original) The method of claim 1 wherein the upstream device is another
2 queuing device.

1 7. (Original) The method of claim 1 wherein the queuing device is a network
2 processor or traffic manager.

1 8. (Original) The method of claim 1 wherein the packets are at least one of Internet
2 Protocol ("IP") packets, multiprotocol label switching ("MPLS") packets, asynchronous
3 transfer mode ("ATM") packets, and frame relay packets.

1 9. (Previously Presented) A system for incorporating a queuing device as a lossless
2 processing stage in a network device in a communications network, comprising:

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3 a processor coupled to the queuing device;

4 and, modules executed by the processor, the modules including:

5 a module for monitoring a depth of a queue in the queuing device, the
6 queue for receiving packets from an upstream device within the network device,
7 the queuing device acting as a discard point by discarding packets when the
8 queue is full;

9 a module for, if the depth passes a predetermined threshold, sending a
10 message to the upstream device to reduce a rate at which packets are sent to the
11 queuing device to prevent the queue from filling and thereby preventing packet
12 discarding and loss by the queuing device; and

13 a module for sending a message reporting the depth of the queue to the
14 upstream device to thereby enable the upstream device to determine whether to
15 reduce or increase the rate at which the upstream device sends packets to the
16 queuing device.

1
1 10. (Previously Presented) The system of claim 9, further comprising a module for, if
2 the depth drops below the predetermined threshold, sending a message to the
3 upstream device to increase the rate at which packets are sent to the queuing device.

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1 11. (Canceled)

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1 12. (Original) The system of claim 9 wherein the module for monitoring further
2 comprises a module for comparing a rate at which packets enter the queuing device to
3 a rate at which packets exit the queuing device.

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1 13. (Original) The system of claim 9 wherein the network device is a router, switch,
2 or gateway.

1

1 14. (Original) The system of claim 9 wherein the upstream device is another
2 queuing device.

1

1 15. (Original) The system of claim 9 wherein the queuing device is a network
2 processor or traffic manager.

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1 16. (Original) The system of claim 9 wherein the packets are at least one of Internet
2 Protocol ("IP") packets, multiprotocol label switching ("MPLS") packets, asynchronous
3 transfer mode ("ATM") packets, and frame relay packets.

1

1 17. (Original) The system of claim 9 wherein the system is implemented within the
2 queuing device.

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1 18. (Original) The system of claim 9 wherein the system is implemented within a

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2 general purpose processor within the network device.

1

1 19. (Original) The system of claim 9 wherein the system is implemented with a field
2 programmable gate array ("FPGA") within the network device.

1

1 20. (Original) The system of claim 9 wherein the system is implemented within a
2 network management system ("NMS") coupled to the network device over the network.

1

1 21. (Previously Presented) A method for incorporating an integrated queuing and
2 packet processing device as a lossless processing stage in a network device in a
3 communications network, comprising:

4 monitoring a depth of a queue in the integrated device, the queue for receiving
5 packets from an upstream device within the network device, the packets from the
6 upstream device including packets having different priorities arbitrated by the
7 upstream device, the integrated device acting as a discard point by discarding packets
8 when the queue is full;

9 if the depth passes a predetermined threshold, sending a message to the
10 upstream device to reduce a rate at which packets are sent to the integrated device to
11 prevent the queue from filling and thereby preventing packet discarding and loss by
12 the integrated device, wherein a rate at which data is sent to the integrated device
13 differs from a rate at which data is sent from the integrated device due to packet

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14 processing within the integrated device; and
15 sending a message reporting the depth of the queue to the upstream device to
16 thereby enable the upstream device to determine whether to reduce or increase the
17 rate at which the upstream device sends packets to the integrated device.

1

1 22. (Previously Presented) The method of claim 21, further comprising, if the depth
2 drops below the predetermined threshold, sending a message to the upstream device to
3 increase the rate at which packets are sent to the integrated device.

1

1 23. (Canceled)

1

1 24. (Original) The method of claim 21 wherein the monitoring further comprises
2 comparing the rate at which data is sent to the integrated device to the rate at which
3 data is sent from the integrated device.

1

1 25. (Original) The method of claim 21 wherein the network device is a router,
2 switch, or gateway.

1

1 26. (Original) The method of claim 21 wherein the upstream device is another
2 integrated device.

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1 27. (Original) The method of claim 21 wherein the integrated device is a network
2 processor or traffic manager.

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1 28. (Original) The method of claim 21 wherein the packets are at least one of
2 Internet Protocol ("IP") packets, multiprotocol label switching ("MPLS") packets,
3 asynchronous transfer mode ("ATM") packets, and frame relay packets.

1

1 29. (Previously Presented) A queuing device for incorporation as a lossless
2 processing stage in a network device in a communications network, comprising:

3 a processor coupled to a queue, the queue for receiving packets from an
4 upstream device within the network device;

5 and, modules executed by the processor, the modules including:

6 a module for monitoring a depth of the queue, the queuing device
7 acting as a discard point by discarding packets when the queue is full;

8 a module for, if the depth passes a predetermined threshold,
9 sending a message to the upstream device to reduce a rate at which
10 packets are sent to the queuing device to prevent the queue from filling
11 and thereby preventing packet discarding and loss by the queuing device;

12 and

13 a module for sending a message reporting the depth of the queue to
14 the upstream device to thereby enable the upstream device to determine

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15 whether to reduce or increase the rate at which the upstream device
16 sends packets to the queuing device.

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1 30. (Previously Presented) The queuing device of claim 29, further comprising a
2 module for, if the depth drops below the predetermined threshold, sending a message to
3 the upstream device to increase the rate at which packets are sent to the queuing
4 device.

1
1 31. (Canceled).

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1 32. (Original) The queuing device of claim 29 wherein the module for monitoring
2 further comprises a module for comparing a rate at which packets enter the queuing
3 device to a rate at which packets exit the queuing device.

1
1 33. (Original) The queuing device of claim 29 wherein the network device is a router,
2 switch, or gateway.

1
1 34. (Original) The queuing device of claim 29 wherein the upstream device is
2 another queuing device.

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1 35. (Original) The queuing device of claim 29 wherein the queuing device is a
2 network processor or traffic manager.

3

1 36. (Original) The queuing device of claim 29 wherein the packets are at least one of
2 Internet Protocol ("IP") packets, multiprotocol label switching ("MPLS") packets,
3 asynchronous transfer mode ("ATM") packets, and frame relay packets.

*

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IX. EVIDENCE APPENDIX

A copy of the following evidence 1) entered by the Examiner, including a statement setting forth where in the record the evidence was entered by the Examiner, 2) relied upon by the Appellant in the appeal, and/or 3) relied upon by the Examiner as to the grounds of rejection to be reviewed on appeal, is attached:

NONE.

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X. RELATED PROCEEDINGS APPENDIX

Copies of relevant decisions in prior or pending appeals, interferences or judicial proceedings, known to Appellant, Appellant's representative, or the Assignee, that may be related to, or which will directly affect or be directly affected by or have a bearing upon the Board's decision in the pending appeal are attached:

NONE.